



CERTIFICATION

Schreiber Translations, Inc.

51 Monroe Street

Suite 101

Rockville, MD 20850

P: 301.424.7737

F: 301.424.2336

This is to certify that the attached English language document, identified as Publication 8701577 Dermatological Test Device, is a true and accurate translation of the original Dutch language document to the best of our knowledge and belief.

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Schreiber Translations, Inc.
51 Monroe Street, Suite 101
Rockville, Maryland 20850
ATA Member 212207

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- 54) Dermatological Test Device.
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- 71) Applicant: Willem van der Bend in *[illegible]*
- 74) Authorized representative: Ir. B.H.J. Schumann c.s.
Patent Bureau Arnold & Siedsma
Piet Heinstraat 7
7511 JE Enschede

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The copy of the description with claim(s) and drawing(s), if any, attached to this sheet contains deviations from the originally filed documents; the latter can be reviewed upon request at the Patent Council.

Dermatological Test Device

The invention relates to a dermatological test device. A known dermatological test device is for instance known from international model filing DM/004 149.

A disadvantage of this known dermatological test device is that the test devices cannot be made automatically, and in particular the test chambers cannot be filled automatically with the preparations to be tested. Furthermore, the known test device has little flexibility and is thick, so that after application to the skin there is a great risk of loosening, in particular if the test device must be applied during a number of days.

The aim of the invention is to provide a dermatological test device that can be made and filled automatically in advance, and which is sufficiently flexible so that when applied, the test device conforms to the skin and as a result of the smallest possible thickness does not generate in essence loosening forces.

This is achieved according to the invention because the dermatological test device according to the invention comprises a flexible strip attached on a flexible carrier layer provided with an adhesive agent, in which at least one angular passage is formed, said passage forming together with the carrier layer a test chamber, with possibly an absorbing material being placed in the test chamber to receive a preparation to be tested, and a removable cover layer attached to the strip by means of an adhesive agent.

The test device is easy to make because the strip with angular passages punched through it is glued on the carrier layer, forming the test chamber that can be filled automatically with liquid, gel-like or paste-like preparations and finally closed with the cover layer.

[page 2 missing] the dermatological test device according to the invention, that are given as examples and shown in the attached drawing, where:

Fig. 1, 2 and 3 show each an isometric exploded view of the three execution forms of the dermatological test device according to the invention; and

Fig. 4 shows an isometric view of the test device from fig. 3, being prepared for use.

The dermatological test device 1 according to fig.1 comprises a flexible carrier layer 3 provided with an adhesive agent 2, on which is attached a flexible strip 4 in which by preference square passages 5 are punched. Each passage 5 with the underneath located carrier layer forms a test chamber 6, in which a liquid-proof sheet 7 and an absorbent material 8 are placed. The test chambers 6 are closed with a removable cover layer 9 that is attached with an adhesive agent 10 to strip 4.

The test devices 1 are suitable for direct use, meaning that a test preparation is placed in advance in the test chambers, or for indirect use, whereby a desired test preparation is placed in the test chambers shortly before use.

Fig. 2 shows another dermatological test device 21 according to the invention that is also constructed of a flexible strip 4 with passages 5 attached to a carrier layer 3 with adhesive agent 2 and covered with a removable cover layer 9. In this case, only absorption material 8 is present in each test chamber 6.

Deviating from the dermatological test device from fig.1, the carrier layer 3 is provided with carrier edges 11 and 12 extending sideways of strip 4 and are covered by sealing edges 13 and 14 that are also extending sideways of strip 4.

In this case, the materials are selected in such a manner that the cover layer 9 with its edges 13 and 14 can be removed from strip 4 and is thereby detached from the carrier edges 11 and 12 which serve subsequently as adhesive edges 11 and 12 when the test device 21 is applied.

Fig. 3 and 4 show the most favorable test device 15 according to the invention.

The dermatological test device 15 according to fig. 3 and 4 deviates from the dermatological test device 21 according to fig. 2, because between carrier edge 12 and sealing edge 14, and between carrier edge 11 and sealing edge 13 a cover strip 16, 17, respectively, is placed each time. These cover strips are provided on the surface 18, facing the respective carrier edges 11 and 12, with a layer 19 that rejects the adhesive agent 2. Since these cover strips 16 and 17 are sealed with adhesive agent 10 to cover layer 9, and strip 4 is attached with adhesive agent 2 to carrier layer 9, it has become possible when removing the cover layer 9 to remove at the same time the cover edges sealed to it from the carrier layer 3, so that the sticky carrier edges 11 and 12 as well as test chamber 6 can be freed simultaneously.

Preferably, strip 4 consists of a closed-cell, foamed plastic, for instance polyethylene or polypropylene (specific gravity 0.25), making the strip flexible and elastic for application to the skin and avoiding relative shifting as much as possible.

The carrier layer 3 is for instance formed of a non-woven plastic on which a normal, skin-friendly adhesive agent, for instance acryl is applied.

Filtering paper can for instance be used as absorbent material 8; however any dermatologically acceptable material can be applied. If the preparation consists of a creme, gel or ointment, it is even possible to do entirely without the absorbent material 8.

The seal layer applied to cover layer 3 consists preferably of a hot melt adhesive, in particular ethylvinylacetate. A sealing operation does not interfere in essence with the manufacturing process of the test device according to the invention.

A difference in adhesion of cover strips 16 and 17 with cover layer 9 and carrier layer 3 is reinforced because the strips are provided with an adhesive agent rejecting layer, such as silicon paper or silicon polyethylene. The cover layer 9 preferably consists of polyester or polyethylene.

The liquid-proof layer 7 that can be placed in test chamber 6 under the absorbent material 8 preferably consists of polyethylene, polystyrene or polypropylene.

Claims

1. Dermatological test device, comprising a flexible strip, attached to a flexible carrier layer provided with an adhesive layer, in which at least one angular passage is formed, said passage forming with the carrier layer a test chamber, with possibly an absorbent material being placed in the test chamber for receiving the preparation to be tested, and a removable cover layer attached to the strip by means of an adhesive agent.
2. Test device according to claim 1, characterized in that the carrier layer with the carrier edges extends sideways of the strip, and that the cover layer with the sealing edges extends sideways of the strip.
3. Test device according to claim 2, characterized in that the carrier edges and sealing edges are attached to each other by means of the adhesive agent.
4. Test device according to claim 2 or 3, characterized in that cover strips are placed between the carrier edges and the sealing edges.
5. Test device according to claim 4, characterized in that the cover strips are provided with an adhesive agent rejecting layer on the surface facing the carrier edges.
6. Test device according to claim 4 or 5, characterized in that the adhesive agent for the removable attachment of the cover layer consists of a sealing layer applied on the surface facing the cover strips of the cover layer.
7. Test device according to claims 1-6, characterized in that a liquid-proof layer is placed in the test chamber between the carrier layer and the absorbent material.
8. Test device according to claims 1-7, characterized in that the carrier layer is a non-woven plastic featuring a skin-friendly adhesive agent, for instance acryl.
9. Test device according to claims 1-8, characterized in that the strip is a closed-cell, foamed plastic...*[text after this point is missing]*